REMARKS/ARGUMENTS

Claim 72 is pending in the instant application. Claim 72 stands rejected under 35 U.S.C. 103(a) as being obvious over United States Patent No. 5,545,396 to Albert et al. in view of United States Patent No. 5,809,801. Claim 72 stands rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 11-13 of United States Patent No. 6,305,190. Claim 72 stands rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 6, 10, and 15 of United States Patent No. 6,079,213. The application has been amended. The specification has been amended to recite the priority chain. New claims 73-76 have been added. Reconsideration is respectfully requested.

Claim 72 stands rejected under 35 U.S.C. 103(a) as being obvious over United States Patent No. 5,545,396 to Albert et al. in view of United States Patent No. 5,809,801. This rejection is respectfully traversed.

The Examiner has cited the combination of two references to render the present invention obvious. Applicants respectfully submit, however, that neither reference discloses a thawed hyperpolarized gas which retains a polarization level at least 30% of its initial polarization level. As the Examiner correctly notes, Albert "does not disclose details related to the polarization level obtained upon thawing the noble gas". Cates is then relied upon to teach a gas retaining 66% of its initial polarization level *upon freezing*. The 66% level disclosed by Cates refers to the amount of polarization retained when the hyperpolarized gas has been completely frozen, not after it has been thawed.

The Examiner has the burden of establishing a prima facie case of obviousness of the present invention. MPEP §2143 states the three criteria required to establish a prima facie case, the last of which is that:

> **Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.**

However, as pointed out above, neither reference teaches or suggests the post-thaw polarization levels of the present invention.

The Examiner simply concludes that it would have been obvious for one to "optimize" the post freeze level of polarization of a gas as taught by Cates. Yet the Examiner appears to be mixing stages. The passage from Cates cited by the Examiner (Col. 22, lines 15-32) does not describe a 'post-freeze' process for a hyperpolarized gas, it is describing the 'freezing' process for the gas. Applicants submit that Cates is simply noting that the freezing process for a hyperpolarized gas takes time to accumulate a given sample (here, 1L of polarized gas) of frozen gas while during this same time, the already-frozen hyperpolarized gas is already relaxing. Thus there is a time limitation when additional accumulation negates the levels of polarization in the sample. There is no disclosure, teaching, or suggestion in Cates of how to thaw this accumulated sample in a manner to retain a level of polarization at least 30% of its initial level upon freezing.

Therefore, as neither reference, either alone or in combination, discloses, teaches, or suggests a method of thawing a frozen hyperpolarized gas such that the noble gas product

resulting from the thawing step exhibits a polarization level at least 30% of a first polarization level, Applicants respectfully submit that the present invention is patentably distinct thereover. Reconsideration and withdrawal of the rejection are respectfully requested.

Claim 72 stands rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 11-13 of United States Patent No. 6,305,190. Claim 72 also stands rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 6, 10, and 15 of United States Patent No. 6,079,213. In the interests of furthering prosecution, Applicants agree to file a Terminal Disclaimer with respect to these two references upon receiving from the Office an indication of allowability of the present claims.

In view of the amendments and remarks hereinabove, Applicants respectfully submit that the instant application, including claims 72-76, is patentably distinct over the prior art. Favorably action thereon is respectfully requested.

Any questions with respect to the foregoing may be directed to Applicants' undersigned counsel at the telephone number listed below.

Respectfully submitted,

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